

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

WSOU INVESTMENTS, LLC D/B/A  
BRAZOS LICENSING AND  
DEVELOPMENT,

Plaintiff,

v.

CISCO SYSTEMS, INC.,

Defendant.

CIVIL ACTION NO. 6:21-CV-128

**JURY TRIAL DEMANDED**

**DEFENDANT CISCO SYSTEMS, INC.'S ANSWER TO PLAINTIFF WSOU  
INVESTMENTS, LLC D/B/A BRAZOS LICENSING AND DEVELOPMENT'S  
COMPLAINT**

Defendant Cisco Systems, Inc. ("Cisco Systems"), by and through undersigned counsel, hereby answers the Complaint ("Complaint") filed by plaintiff WSOU Investments, LLC d/b/a Brazos Licensing and Development ("WSOU"). Cisco Systems hereby responds in numbered paragraphs corresponding to numbered paragraphs of the Complaint, and in doing so denies the allegations of the Complaint except as specifically stated:

1. This Complaint arises from Cisco Systems' unlawful infringement of the following United States patents owned by Brazos: United States Patent Nos. 8,989,216 ("216 Patent"), 7,443,859 ("859 Patent"); 8,191,106 ("106 Patent"); 8,665,733 ("733 Patent"); and 9,357,014 ("014 Patent") (collectively, the "Asserted Patents").

**ANSWER TO PARAGRAPH 1:** Cisco Systems admits that the Complaint was filed by WSOU against Cisco Systems, alleging patent infringement. Cisco Systems denies that the Complaint arises from unlawful infringement of the above named patents and any other allegations in Paragraph 1.

2. Plaintiff Brazos is a limited liability corporation organized and existing under the laws of Delaware, with its principal place of business at 605 Austin Avenue, Suite 6, Waco, Texas 76701.

**ANSWER TO PARAGRAPH 2:** Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in Paragraph 2 and on that basis denies each and every allegation.

3. Defendant Cisco Systems is a corporation organized under the laws of the State of California, with its principal place of business at 170 W. Tasman Dr., San Jose, CA 95134. Cisco Systems is registered to do business in the state of Texas. Cisco Systems is doing business, either directly or through its agents, on an ongoing basis in this judicial district and elsewhere in the United States, and has a regular and established place of business in this judicial district at its campuses at 12515-3 Research Park Loop, Austin, TX 78759, and at 18615 Tuscany Stone, San Antonio, TX 78258. Cisco Systems may be served with process through its registered agent, Corporation Service Company d/b/a CSC-Lawyers Incorporating Service Company, 211 E. 7th St., Suite 620, Austin, TX 78701-3218.<sup>1</sup>

**ANSWER TO PARAGRAPH 3:** Cisco Systems denies that it is a corporation organized under the laws of the State of California. Cisco Systems admits that its principal place of business is at 170 W. Tasman Dr., San Jose, CA 95134. Cisco Systems admits that it is registered to do business in the state of Texas, that Cisco Systems has business addresses at 12515-3 Research Park Loop, Austin, TX 78759, and at 18615 Tuscany Stone, San Antonio, TX 78258. Otherwise, Cisco Systems Networks denies the allegations in Paragraph 3.

4. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this action arises under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.*

**ANSWER TO PARAGRAPH 4:** Cisco Systems admits that the Complaint purports to set forth an action for patent infringement under the Patent Laws of the United States, Title 35 of the United States Code, but denies that there are actual or legal bases for WSOU's claims. To the extent Paragraph 4 alleges legal conclusions, no response is required. To the extent an answer is required, Cisco Systems denies all remaining allegations in Paragraph 4.

5. This Court has personal jurisdiction over Cisco Systems in this action because Cisco Systems has committed acts of infringement of the Asserted Patents within this District

giving rise to this action, and has established minimum contacts with this forum such that the exercise of jurisdiction over Cisco Systems would not offend traditional notions of fair play and substantial justice. Cisco Systems, directly and through subsidiaries or intermediaries, has committed and continues to commit acts of infringement in this District by, among other things, making, using, importing, offering to sell, and selling products that infringe the Asserted Patents. Notably, Cisco Systems has repeatedly failed to dispute that this Court has personal jurisdiction over it in patent actions. *See, e.g.,* Motion to Dismiss, *Monarch Networking Sols. LLC v. Cisco Sys., Inc.*, 6:20-cv-00381-ADA (W.D. Tex. July 23, 2020), ECF No. 19; Motion to Dismiss, *Sable Networks, Inc. v. Cisco Sys., Inc.*, 6:20-cv-00288-ADA (W.D. Tex. June 19, 2020), ECF No. 15.

**ANSWER TO PARAGRAPH 5:** Cisco Systems denies that it conducts any “acts of infringement” related to the Asserted Patents. Cisco Systems admits that it did not dispute personal jurisdiction in *Monarch Networking Sols. LLC v. Cisco Systems Sys., Inc.*, 6:20-cv-00381-ADA (W.D. Tex. July 23, 2020) and *Sable Networks, Inc. v. Cisco Systems Sys., Inc.*, 6:20-cv-00288-ADA (W.D. Tex. June 19, 2020). To the extent Paragraph 5 alleges legal conclusions, no response is required. To the extent an answer is required, Cisco Systems denies all remaining allegations in Paragraph 5.

6. Venue is proper in this District under 28 U.S.C. §§ 1391(b), (c), (d) and 1400(b). Cisco Systems is registered to do business in Texas and, upon information and belief, Cisco Systems has transacted business in this District and has committed acts of direct and indirect infringement in this District by, among other things, importing, offering to sell, and selling products that infringe the Asserted Patents. Cisco Systems has a regular and established place of business in the District, including campuses at 12515-3 Research Park Loop, Austin, TX 78759, and at 18615 Tuscany Stone, San Antonio, TX 78258.

**ANSWER TO PARAGRAPH 6:** Cisco Systems denies that it has “committed acts of direct and indirect infringement” related to the Asserted Patents. Cisco Systems denies that any “transacted business in this District” infringes the Asserted Patents. Cisco Systems admits that it has campuses at 12515-3 Research Park Loop, Austin, TX 78759 and at 18615 Tuscany Stone, San Antonio, TX 78258. Cisco Systems admits that it is registered to do business in Texas. To the extent Paragraph 6 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no response is required. *See* D.I. 22. To the

extent Paragraph 6 alleges legal conclusions, no response is required. To the extent an answer is required, Cisco Systems denies all remaining allegations in Paragraph 6.

**RESPONSE TO COUNT 1**

7. Brazos repeats and re-alleges the allegations in the preceding paragraphs as if fully set forth herein.

**ANSWER TO PARAGRAPH 7:** Cisco Systems repeats and re-alleges the responses set forth in the preceding paragraphs above as though set forth in length herein.

8. On March 24, 2015 the U.S. Patent & Trademark Office duly and legally issued the '216 Patent entitled "Diameter versioning dictionary." A true and correct copy of the '216 Patent is attached as Exhibit A to this Complaint.

**ANSWER TO PARAGRAPH 8:** Cisco Systems admits that Exhibit A appears to be a copy of the '216 patent, which is titled "Diameter versioning dictionary." Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations contained in Paragraph 8 and on that basis denies each and every allegation.

9. Brazos is the owner of all rights, title, and interest in and to the '216 Patent, including the right to assert all causes of action arising under the '216 Patent and the right to any remedies for the infringement of the '216 Patent.

**ANSWER TO PARAGRAPH 9:** Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in Paragraph 9 and on that basis denies each and every allegation.

10. Claim 4 of the '216 Patent recites:

4. A network node comprising a Diameter protocol command dictionary comprising: a first definition for a Diameter protocol command, wherein said Diameter protocol command is defined by a first default definition unless a first context applies in which case said command is defined by a context-specific definition, and the Diameter protocol command dictionary supports multiple versions of a standard, a second definition for a Diameter protocol attribute value pair (AVP), wherein said command or AVP is defined by a second default definition unless a second context applies in which case said AVP is defined by a second context-specific definition, wherein said Diameter protocol command dictionary

interoperates with a Diameter protocol stack to perform functions for processing Diameter messages.

**ANSWER TO PARAGRAPH 10:** Cisco Systems admits the allegations in Paragraph 10.

11. Cisco Systems has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, one or more claims, including at least claim 4, of the '216 Patent in violation of 35 U.S.C. § 271(a) because Cisco Systems makes, uses, offers for sale, sells, and/or imports certain products, including within this District, such diameter dictionaries that are implemented in at least the following products: Cisco ASR 5500, Cisco ASR 5700, Cisco ASR 5000 Small Cell Gateway Series, and Cisco Virtual Packet Core ("216 Accused Products"). Cisco Systems' infringing use of the '216 Accused Products includes its internal use and testing of the '216 Accused Products.

**ANSWER TO PARAGRAPH 11:** Cisco Systems denies each and every allegation contained in Paragraph 11.

12. The '216 Accused Products satisfy all claim limitations of one or more of the claims of the '216 Patent, including at least claim 4.

**ANSWER TO PARAGRAPH 12:** Cisco Systems denies each and every allegation contained in Paragraph 12.

13. For example, the '216 Accused Products implement a network node comprising a Diameter protocol command dictionary comprising: a first definition for a Diameter protocol command, wherein said Diameter protocol command is defined by a first default definition unless a first context applies in which case said command is defined by a context-specific definition, and the Diameter protocol command dictionary supports multiple versions of a standard. Cisco Systems provides various diameter dictionaries that are used by the '216 Accused Products. The dictionaries included in the Cisco Systems diameter dictionaries are DPCA, DCCA, CSCF, and Diameter AAA.<sup>2</sup> A standard dictionary is used (e.g., a default definition) until there is a specific context. In the case of a specific context, custom-defined dictionaries are used.<sup>3</sup>

**ANSWER TO PARAGRAPH 13:** Cisco Systems denies each and every allegation contained in Paragraph 13.

14. The '216 Accused Products also comprise a second definition for a Diameter protocol attribute value pair ("AVP"), wherein said command or AVP is defined by a second default definition unless a second context applies in which case said AVP is defined by a second context-specific definition, wherein said Diameter protocol command dictionary interoperates with a Diameter protocol stack to perform functions for processing Diameter messages. The Diameter Attribute Value Pair is used to carry the specific authentication, accounting, authorization, routing, and security information, and configuration details for the requests made by the nodes and the replies received by them.<sup>4</sup> The Diameter protocol command dictionary

interoperates with multiple dictionary protocols (e.g., a Diameter protocol stack) to perform functions for processing Diameter messages.<sup>5</sup>

**ANSWER TO PARAGRAPH 14:** Cisco Systems denies each and every allegation contained in Paragraph 14.

15. Cisco Systems has received notice and actual or constructive knowledge of the '216 Patent and the infringing nature of the '216 Accused Products since at least the date of service of this Complaint.

**ANSWER TO PARAGRAPH 15:** To the extent Paragraph 15 alleges legal conclusions, no response is required. To the extent an answer is required, Cisco Systems denies all allegations contained in Paragraph 15.

16. Since at least the date of service of this Complaint, through its actions, Cisco Systems has indirectly infringed and continues to indirectly infringe the '216 Patent in violation of 35 U.S.C. § 271(b). Cisco Systems has actively induced product makers, distributors, retailers, and/or end users of the '216 Accused Products to directly infringe the '216 Patent throughout the United States, including within this Judicial District, by, among other things, advertising and promoting the use of the '216 Accused Products in various websites, including providing and disseminating product descriptions, operating manuals, and other instructions on how to implement and configure the '216 Accused Products. Examples of such advertising, promoting, and/or instructing include the documents at:

- <https://www.cisco.com/c/en/us/products/wireless/asr-5500/index.html>
- <https://www.cisco.com/c/en/us/support/wireless/asr-5500/model.html>
- [https://www.cisco.com/c/en/us/products/collateral/wireless/asr-5500/data\\_sheet\\_c78-707265.html](https://www.cisco.com/c/en/us/products/collateral/wireless/asr-5500/data_sheet_c78-707265.html)
- [https://www.cisco.com/c/en/us/td/docs/wireless/asr\\_5000/platform/Install-ASR5500/b\\_ASR5500\\_Install.html](https://www.cisco.com/c/en/us/td/docs/wireless/asr_5000/platform/Install-ASR5500/b_ASR5500_Install.html)
- <https://www.cisco.com/c/en/us/support/wireless/asr-5700/model.html>
- <https://www.cisco.com/c/en/us/support/wireless/asr-5000-small-cell-gateway/series.html>
- <https://www.cisco.com/c/en/us/support/wireless/virtual-packet-core/series.html>

**ANSWER TO PARAGRAPH 16:** To the extent Paragraph 16 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no response is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 16.

17. Cisco Systems does so knowing and intending that its customers and end users will commit these infringing acts. Cisco Systems also continues to make, use, offer for sale, sell, and/or import the '216 Accused Products, despite its knowledge of the '216 Patent, thereby specifically intending for and inducing its customers to infringe the '216 Patent through the customers' normal and customary use of the '216 Accused Products.

**ANSWER TO PARAGRAPH 17:** Cisco Systems denies each and every allegation contained in Paragraph 17.

18. In addition, Cisco Systems has indirectly infringed and continues to indirectly infringe the '216 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the '216 Accused Products with knowledge that they are especially designed or adapted to operate in a manner that infringes that patent and despite the fact that the infringing technology or aspects of the products are not a staple article of commerce suitable for substantial non-infringing use.

**ANSWER TO PARAGRAPH 18:** To the extent Paragraph 18 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 18.

19. For example, Cisco Systems is aware that the technology described above included in the '216 Accused Products enables the product to operate as described above and that such functionality infringes the '216 Patent, including claim 4. Cisco Systems continues to sell and offer to sell these products in the United States after receiving notice of the '216 Patent and how the products' functionality infringe that patent.

**ANSWER TO PARAGRAPH 19:** Cisco Systems denies each and every allegation contained in Paragraph 19.

20. The infringing aspects of the '216 Accused Products can be used only in a manner that infringes the '216 Patent and thus have no substantial non-infringing uses. The infringing

aspects of those instrumentalities otherwise have no meaningful use, let alone any meaningful non-infringing use.

**ANSWER TO PARAGRAPH 20:** Cisco Systems denies each and every allegation contained in Paragraph 20.

21. Brazos has suffered damages as a result of Cisco Systems' direct and indirect infringement of the '216 Patent in an amount adequate to compensate for Cisco Systems' infringement, but in no event less than a reasonable royalty for the use made of the invention by Cisco Systems, together with interest and costs as fixed by the Court.

**ANSWER TO PARAGRAPH 21:** To the extent Paragraph 21 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims. *See* D.I. 22. Otherwise, Cisco Systems denies each and every allegation contained in Paragraph 21.

### **RESPONSE TO COUNT 2**

22. Brazos repeats and re-alleges the allegations in the preceding paragraphs as if fully set forth herein.

**ANSWER TO PARAGRAPH 22:** Cisco Systems repeats and re-alleges the responses set forth in the preceding paragraphs above as though set forth in length herein.

23. On October 28, 2008, the U.S. Patent & Trademark Office duly and legally issued the '859 Patent entitled "Method and apparatus for address allocation in GPRS networks that facilitates end-to-end security." A true and correct copy of the '859 Patent is attached as Exhibit B to this Complaint.

**ANSWER TO PARAGRAPH 23:** Cisco Systems admits that Exhibit B appears to be a copy of the '859 patent, which is titled "Method and apparatus for address allocation in GPRS networks that facilitates end-to-end security." Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations contained in Paragraph 23 and on that basis denies each and every allegation.

24. Brazos is the owner of all rights, title, and interest in and to the '859 Patent, including the right to assert all causes of action arising under the '859 Patent and the right to any remedies for the infringement of the '859 Patent.

**ANSWER TO PARAGRAPH 24:** Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in Paragraph 24 and on that basis denies each and every allegation.

25. Claim 1 of the '859 Patent recites:

1. A method comprising:

receiving an Activate Packet Data Protocol (PDP) Context Request message at a Serving General Packet Radio System (GPRS) Support Node (SGSN) of a network from a mobile station of the network, the Activate PDP Context Request message having an APN (Access Point Name) field containing information that explicitly indicates requesting either a private network address or a public network address to be assigned to the mobile station; and

sending an Activate PDP Context Accept message to the mobile station containing information assigning one of a private network address and a public network address to the mobile station based on the information contained in the APN field of the Activate PDP Context Request message.

**ANSWER TO PARAGRAPH 25:** Cisco Systems admits the allegations in paragraph 25.

26. Cisco Systems has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, one or more claims, including at least claim 1, of the '859 Patent in violation of 35 U.S.C. § 271(a) because Cisco Systems makes, uses, offers for sale, sells, and/or imports certain products, including within this Judicial District, such as Cisco Systems' switches that support Cisco Star OS, which is implemented on at least the following products: the Cisco ASR 5500, Cisco ASR 5700, and Cisco Virtual Packet Core ("'859 Accused Products"). Cisco Systems' infringing use of the '859 Accused Products includes its internal use and testing of the '859 Accused Products.

**ANSWER TO PARAGRAPH 26:** Cisco Systems denies each and every allegation contained in Paragraph 26.

27. The '859 Accused Products satisfy all claim limitations of the one or more claims of the '859 Patent, including at least claim 1.

**ANSWER TO PARAGRAPH 27:** Cisco Systems denies each and every allegation contained in Paragraph 27.

28. By way of example, the '859 Accused Products practice a method which receives an Activate Packet Data Protocol ("PDP") Context Request message at a Serving General Packet

Radio System (“GPRS”) Support Node (“SGSN”) of a network from a mobile station of the network, the Activate PDP Context Request message having an Access Point Name (“APN”) field containing information that explicitly indicates requesting either a private network address or a public network address to be assigned to the mobile station. The ’859 Accused Products provide an SGSN application that runs on the ’859 Accused Products and virtualized platforms.<sup>6</sup> SGSN and Gateway GPRS Support Nodes (“GGSN”) work in conjunction to keep user equipment connected to the Internet and IP-based applications.<sup>7</sup> To resolve received APNs in a PDP activation request message, the SGSN sends a Create PDP context request (“DNS query”) to the GGSN. The SGSN, in turn, sends an APN restriction value in the Create PDP context request for establishing a PDP context.<sup>8</sup> The APN restriction value defines the type of APN access, whether private or public.<sup>9</sup>

**ANSWER TO PARAGRAPH 28:** Cisco Systems denies each and every allegation contained in Paragraph 28.

29. Further, the method practiced by the ’859 Accused Products comprises sending an Activate PDP Context Accept message to the mobile station containing information assigning one of a private network address and a public network address to the mobile station based on the information contained in the APN field of the Activate PDP Context Request message. The SGSN sends an Activate PDP context to accept message to user equipment/mobile stations along with the IP address based on the successful GGSN resolution of the DNS query by utilizing APN restriction value.<sup>10</sup> After verifying the APN restriction values, the GGSN creates the PDP context and sends a create response message back to the SGSN containing the IP address assigned to the user equipment/mobile station. The SGSN then sends an Activate PDP Context Accept message to the user equipment/mobile station.<sup>11</sup>

**ANSWER TO PARAGRAPH 29:** Cisco Systems denies each and every allegation contained in Paragraph 29.

30. Cisco Systems has received notice and actual or constructive knowledge of the ’859 Patent and the infringing nature of the ’859 Accused Products since at least the date of service of this Complaint.

**ANSWER TO PARAGRAPH 30:** Cisco Systems denies each and every allegation contained in Paragraph 30.

31. Since at least the date of service of this Complaint, through its actions, Cisco Systems has indirectly infringed and continues to indirectly infringe the ’859 Patent in violation of 35 U.S.C. § 271(b). Cisco Systems has actively induced product makers, distributors, retailers, and/or end users of the ’859 Accused Products to directly infringe the ’859 Patent throughout the United States, including within this Judicial District, by, among other things, advertising and promoting the use of the ’859 Accused Products in various websites, including providing and disseminating product descriptions, operating manuals, and other instructions on how to

implement and configure the '859 Accused Products. Examples of such advertising, promoting, and/or instructing include the documents at:

- [https://www.cisco.com/c/en/us/td/docs/wireless/asr\\_5000/21-15\\_6-9/SGW-Admin/21-15-SGSN-Admin.pdf](https://www.cisco.com/c/en/us/td/docs/wireless/asr_5000/21-15_6-9/SGW-Admin/21-15-SGSN-Admin.pdf)
- [https://www.cisco.com/c/en/us/td/docs/wireless/asr\\_5000/21-3\\_N5-5/GGSN/21-3-GGSN-Admin/21-GGSN-Admin\\_chapter\\_011.html](https://www.cisco.com/c/en/us/td/docs/wireless/asr_5000/21-3_N5-5/GGSN/21-3-GGSN-Admin/21-GGSN-Admin_chapter_011.html)
- <https://www.cisco.com/c/en/us/products/wireless/asr-5500/index.html>
- <https://www.cisco.com/c/en/us/support/wireless/asr-5700/model.html>
- <https://www.cisco.com/c/en/us/support/wireless/virtual-packet-core/series.html>

**ANSWER TO PARAGRAPH 31:** To the extent Paragraph 31 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 31.

32. Cisco Systems does so knowing and intending that its customers and end users will commit these infringing acts. Cisco Systems also continues to make, use, offer for sale, sell, and/or import the '859 Accused Products, despite its knowledge of the '859 Patent, thereby specifically intending for and inducing its customers to infringe the '859 Patent through the customers' normal and customary use of the '859 Accused Products.

**ANSWER TO PARAGRAPH 32:** Cisco Systems denies each and every allegation contained in Paragraph 32.

33. In addition, Cisco Systems has indirectly infringed and continues to indirectly infringe the '859 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the '859 Accused Products with knowledge that they are especially designed or adapted to operate in a manner that infringes that patent and despite the fact that the infringing technology or aspects of the products are not a staple article of commerce suitable for substantial non-infringing use.

**ANSWER TO PARAGRAPH 33:** To the extent Paragraph 33 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and

no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 33.

34. For example, Cisco Systems is aware that the Cisco Star OS technology included in the '859 Accused Products enables the products to operate as described above and that such functionality infringes the '859 Patent, including claim 1. Cisco Systems continues to sell and offer to sell such products in the United States after receiving notice of the '859 Patent and how the products' functionality infringes that patent.

**ANSWER TO PARAGRAPH 34:** Cisco Systems denies each and every allegation contained in Paragraph 34.

35. The infringing aspects of the '859 Accused Products can be used only in a manner that infringes the '859 Patent and thus have no substantial non-infringing uses. The infringing aspects of those instrumentalities otherwise have no meaningful use, let alone any meaningful non-infringing use.

**ANSWER TO PARAGRAPH 35:** Cisco Systems denies each and every allegation contained in Paragraph 35.

36. Brazos has suffered damages as a result of Cisco Systems' direct and indirect infringement of the '859 Patent in an amount adequate to compensate for Cisco Systems' infringement, but in no event less than a reasonable royalty for the use made of the invention by Cisco Systems, together with interest and costs as fixed by the Court.

**ANSWER TO PARAGRAPH 36:** To the extent Paragraph 36 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 36.

### **RESPONSE TO COUNT 3**

37. Brazos repeats and re-alleges the allegations in the preceding paragraphs as if fully set forth herein.

**ANSWER TO PARAGRAPH 37:** Cisco Systems repeats and re-alleges the responses set forth in the preceding paragraphs above as though set forth in length herein.

38. On May 29, 2012, the U.S. Patent & Trademark Office duly and legally issued the '106 Patent entitled "System and method of network access security policy management for

multimodal device.” A true and correct copy of the ’106 Patent is attached as Exhibit C to this Complaint.

**ANSWER TO PARAGRAPH 38:** Cisco Systems admits that Exhibit C appears to be a copy of the ’106 patent, which is titled “System and method of network access security policy management for multimodal device.” Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations contained in Paragraph 38 and on that basis denies each and every allegation.

39. Brazos is the owner of all rights, title, and interest in and to the ’106 Patent, including the right to assert all causes of action arising under the ’106 Patent and the right to any remedies for the infringement of the ’106 Patent.

**ANSWER TO PARAGRAPH 39:** Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in Paragraph 39 and on that basis denies each and every allegation.

40. Claim 1 of the ’106 Patent recites:

1. A system for network access security policy management of multimodal access to a converged network, the system comprising:

an inter-technology change-off monitoring entity (ICME) for detecting an inter-technology change-off of a multimodal device from a first access technology of the converged network to a second access technology of the converged network, and for transmitting an inter-technology change-off message;

a policy database for storing a plurality of access technology policies; and

a policy manager for receiving said inter-technology change-off message from the ICME, for searching said policy database for an access technology policy corresponding to said second access technology, for determining appropriate policies to be enforced, and for distributing said appropriate policies to at least one policy enforcement point (PEF) for enforcing said appropriate policies in respect of access by the multimodal device to the converged network,

wherein at least one of the ICME and the policy manager is implemented in hardware.

**ANSWER TO PARAGRAPH 40:** Cisco Systems admits the allegations in paragraph 40.

41. Cisco Systems has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, one or more claims, including at least claim 1, of the '106 Patent in violation of 35 U.S.C. § 271(a) because Cisco Systems makes, uses, offers for sale, sells, and/or imports certain products, including within this Judicial District, such as the Cisco Packet Gateway and Policy Manager, which is implemented on at least the following products: Cisco Cloud Services Router 1000V Series, Cisco 1000 Series Aggregation Services Routers, Cisco ASR 9000 Series Aggregation Services Routers, Cisco 5500 Series Wireless Controllers, Cisco 8500 Series Wireless Controllers, Cisco Virtual Wireless Controller, and Cisco Aironet 1530, 1550, and 1570 Series Outdoor Access Points ("106 Accused Products"). Cisco Systems' infringing use of the '106 Accused Products includes its internal use and testing of the '106 Accused Products.

**ANSWER TO PARAGRAPH 41:** Cisco Systems denies each and every allegation contained in Paragraph 41.

42. The '106 Accused Products satisfy all claim limitations of at least one or more of the claims of the '106 Patent, including at least claim 1.

**ANSWER TO PARAGRAPH 42:** Cisco Systems denies each and every allegation contained in Paragraph 42.

43. By way of example, the '106 Accused Products practice a system for network access security policy management of multimodal access to a converged network. Cisco Systems provides a system for network access security policy management of multimodal access (e.g., Wi-Fi and cellular access) to a converged network (e.g., the network comprises both Wi-Fi and cellular technology). Cisco Systems' converged network architecture comprises elements including, but not limited to, Access Points ("APs"), Wireless Controllers ("WLCs"), Wireless Access Gateway ("WAG"), Packet Gateway ("PGW"), Policy and Charging Rule Function ("PCRF"), Policy and Charging Enforcement Function ("PCEF").<sup>12</sup>

**ANSWER TO PARAGRAPH 43:** Cisco Systems denies each and every allegation contained in Paragraph 43.

44. The '106 Accused Products practice an inter-technology change-off monitoring entity ("ICME") for detecting an inter-technology change-off of a multimodal device from a first access technology (e.g., a 3G/4G/LTE network) of the converged network to a second access technology of the converged network (e.g., WLAN), and for transmitting an inter-technology change-off message (e.g., via a DHCP message).<sup>13</sup> The '106 Accused Products enables user equipment ("UE") connected to, e.g., an LTE network to initiate authentication using available cellular network credentials after which a DHCP sequence is performed signaling the start of the handoff process between access technologies (e.g., detecting an inter-technology change-off).<sup>14</sup>

**ANSWER TO PARAGRAPH 44:** Cisco Systems denies each and every allegation contained in Paragraph 44.

45. Further, the '106 Accused Products practice a policy database for storing a plurality of access technology policies. Cisco System's PCRF Authentication, Authorization, and Accounting ("AAA") servers store subscriber profiles (e.g., storing a plurality of access technology policies) and provide subscriber management, authentication, and network policy control functionalities.<sup>15</sup> The stored subscriber profiles affect applied services for a UE.<sup>16</sup>

**ANSWER TO PARAGRAPH 45:** Cisco Systems denies each and every allegation contained in Paragraph 45.

46. Finally, the '106 Accused Products practice a policy manager for receiving said inter-technology change-off message from the ICME, for searching said policy database for an access technology policy corresponding to said second access technology, for determining appropriate policies to be enforced, and for distributing said appropriate policies to at least one policy enforcement point ("PEF") for enforcing said appropriate policies in respect of access by the multimodal device to the converged network. The '106 Accused Products provide WiFi-cellular offloading combining the functionality of Proxy Mobile IPv6 ("PMIPv6") and GPRS Tunneling Protocol ("GTP") on the Cisco Intelligent Services Gateway ("ISG") framework and/or the WAG.<sup>17</sup> This functionality provides handover processing for UEs based upon a received message(s) at the ISG/WAG.<sup>18</sup> Cisco Systems' network architecture consists of, including but not limited to, an ISG/WAG in which edge access devices deliver flexible and scalable services to subscribers which is, in turn, connected to the AAA/PCRF servers to facilitate the retrieval of subscriber information (e.g., a policy manager for receiving a [*sic*] inter-technology change-off message from the ICME which searches a policy database for an access technology).<sup>19</sup> The ISG/WAG, as an example, implements Policy Enforcement Points ("PEPs"), a component of policy-based management (e.g., determining [*sic*] appropriate policies to be enforced).<sup>20</sup> The ISG/WAG retrieves the service profile data associated with the second access technology from the AAA/PCRF servers and acts as a policy manager for providing policy management functions (e.g., distributing said appropriate policies to at least one policy enforcement point). When the service profile is retrieved and a user session is created, the policies are enforced for the UE (e.g., a multimodal device) by the ISG/WAG (e.g., PEF) for enforcing said appropriate policies in respect of access by the multimodal device to the converged network).<sup>21</sup>

**ANSWER TO PARAGRAPH 46:** Cisco Systems denies each and every allegation contained in Paragraph 46.

47. The '106 Accused Products practice a system wherein at least one of the ICME and the policy manager is implemented in hardware. Cisco Systems provides, as one example, the ASR5000 Series hardware for AP/WLAN control (e.g., an ICME) and the Cisco ASR1000 which implements the ISG/WAG (e.g., the policy manager).<sup>22</sup>

**ANSWER TO PARAGRAPH 47:** Cisco Systems denies each and every allegation contained in Paragraph 47.

48. Cisco Systems has received notice and actual or constructive knowledge of the '106 Patent and the infringing nature of the '106 Accused Products since at least the date of service of this Complaint.

**ANSWER TO PARAGRAPH 48:** Cisco Systems denies each and every allegation contained in Paragraph 48.

49. Since at least the date of service of this Complaint, through its actions, Cisco Systems has indirectly infringed and continues to indirectly infringe the '106 Patent in violation of 35 U.S.C. § 271(b). Cisco Systems has actively induced product makers, distributors, retailers, and/or end users of the '106 Accused Products to directly infringe the '106 Patent throughout the United States, including within this Judicial District, by, among other things, advertising and promoting the use of the '106 Accused Products in various websites, including providing and disseminating product descriptions, operating manuals, and other instructions on how to implement and configure the '106 Accused Products. Examples of such advertising, promoting, and/or instructing include the documents at:

- [https://www.cisco.com/c/en/us/td/docs/wireless/asr\\_5000/20/ePDG/b\\_20-ePDG-Admin/b\\_20-ePDG-Admin\\_chapter\\_01.html](https://www.cisco.com/c/en/us/td/docs/wireless/asr_5000/20/ePDG/b_20-ePDG-Admin/b_20-ePDG-Admin_chapter_01.html)
- <https://www.ciscolive.com/c/dam/r/ciscolive/emea/docs/2016/pdf/BRKSPG-2065.pdf>
- <https://www.cisco.com/c/en/us/products/wireless/pgw-packet-data-network-gateway/index.html>
- [https://www.cisco.com/c/en/us/td/docs/wireless/asr\\_5000/21-11\\_6-5/SAEGW-Admin/21-11-SAEGW-Admin.pdf](https://www.cisco.com/c/en/us/td/docs/wireless/asr_5000/21-11_6-5/SAEGW-Admin/21-11-SAEGW-Admin.pdf)
- <https://www.cisco.com/c/en/us/support/routers/cloud-services-router-1000v-series/series.html>
- <https://www.cisco.com/c/en/us/support/routers/asr-1000-series-aggregation-services-routers/series.html>
- <https://www.cisco.com/c/en/us/support/routers/asr-9000-series-aggregation-services-routers/series.html>
- <https://www.cisco.com/c/en/us/support/wireless/8500-series-wireless->

[controllers/series.html](#)

**ANSWER TO PARAGRAPH 49:** To the extent Paragraph 49 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 49.

50. Cisco Systems does so knowing and intending that its customers and end users will commit these infringing acts. Cisco Systems also continues to make, use, offer for sale, sell, and/or import the '106 Accused Products, despite its knowledge of the '106 Patent, thereby specifically intending for and inducing its customers to infringe the '106 Patent through the customers' normal and customary use of the '106 Accused Products.

**ANSWER TO PARAGRAPH 50:** Cisco Systems denies each and every allegation contained in Paragraph 50.

51. In addition, Cisco Systems has indirectly infringed and continues to indirectly infringe the '106 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the '106 Accused Products with knowledge that they are especially designed or adapted to operate in a manner that infringes that patent and despite the fact that the infringing technology or aspects of the products are not a staple article of commerce suitable for substantial non-infringing use.

**ANSWER TO PARAGRAPH 51:** To the extent Paragraph 51 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 51.

52. For example, Cisco Systems is aware that the technology described above included in the '106 Accused Products enables the product to operate as described above and that such functionality infringes the '106 Patent, including claim 1. Cisco Systems continues to sell and offer to sell such products in the United States after receiving notice of the '106 Patent and how the products' functionality infringes that patent.

**ANSWER TO PARAGRAPH 52:** Cisco Systems denies each and every allegation contained in Paragraph 52.

53. The infringing aspects of the '106 Accused Products can be used only in a manner that infringes the '106 Patent and thus have no substantial non-infringing uses. The infringing

aspects of those instrumentalities otherwise have no meaningful use, let alone any meaningful non-infringing use.

**ANSWER TO PARAGRAPH 53:** Cisco Systems denies each and every allegation contained in Paragraph 53.

54. Brazos has suffered damages as a result of Cisco Systems' direct and indirect infringement of the '106 Patent in an amount adequate to compensate for Cisco Systems' infringement, but in no event less than a reasonable royalty for the use made of the invention by Cisco Systems, together with interest and costs as fixed by the Court.

**ANSWER TO PARAGRAPH 54:** To the extent Paragraph 54 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco denies each and every allegation contained in Paragraph 54.

#### **RESPONSE TO COUNT 4**

55. Brazos repeats and re-alleges the allegations in the preceding paragraphs as if fully set forth herein.

**ANSWER TO PARAGRAPH 55:** Cisco Systems repeats and re-alleges the responses set forth in the preceding paragraphs above as though set forth in length herein.

56. On March 4, 2014 the U.S. Patent & Trademark Office duly and legally issued the '733 Patent entitled "Method and apparatus for round trip delay KPI monitoring in live network using user plane probe session." A true and correct copy of the '733 Patent is attached as Exhibit D to this Complaint.

**ANSWER TO PARAGRAPH 56:** Cisco Systems admits that Exhibit D appears to be a copy of the '733 patent, which is titled "Method and apparatus for round trip delay KPI monitoring in live network using user plane probe session." Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations contained in Paragraph 56 and on that basis denies each and every allegation.

57. Brazos is the owner of all rights, title, and interest in and to the '733 Patent, including the right to assert all causes of action arising under the '733 Patent and the right to any remedies for the infringement of the '733 Patent.

**ANSWER TO PARAGRAPH 57:** Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in Paragraph 57 and on that basis denies each and every allegation.

58. Claim 1 of the '733 Patent recites:

1. A method for apportioning delays of a plurality of network elements on a round trip path in a network, said method comprising the steps of:

Transmitting, at a user element, a loopback packet having a probe session indicator along said round trip path, wherein said roundtrip path reaches a core network element, and wherein the loopback packet is received at said user element after completing said roundtrip path;

determining at each of said plurality of network elements on said round trip path the presence of said probe session indicator, and responsive to the presence of said probe session indicator, logging a first timestamp corresponding to the time of receipt of said loopback message, and a second timestamp corresponding to the time of retransmission of said loopback message; and

transmitting at each of said plurality of network elements said first and second timestamps to a network management system.

**ANSWER TO PARAGRAPH 58:** Cisco Systems admits the allegations in Paragraph 58.

59. Cisco Systems has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, one or more claims, including at least claim 1, of the '733 Patent in violation of 35 U.S.C. § 271(a) because Cisco Systems makes, uses, offers for sale, sells, and/or imports certain products, including within this Judicial District, such as the Cisco IOS 15.6M and above, which is implemented on at least the following products: Cisco 800 Series Industrial Integrated Services Routers, Cisco 800M Integrated Services Router, Cisco 1000 Series Connected Grid Routers, Cisco 2000 Series Connected Grid Routers, Cisco Catalyst 9200 Series Switches, Cisco Catalyst 9300 Series Switches, Cisco Catalyst 9400 Series Switches, Cisco Catalyst 9500 Series Switches, and Cisco Catalyst 9600 Series Switches ("733 Accused Products"). Cisco Systems' infringing use of the '733 Accused Products includes its internal use and testing of the '733 Accused Products.

**ANSWER TO PARAGRAPH 59:** Cisco Systems denies each and every allegation contained in Paragraph 59.

60. The '733 Accused Products satisfy all claim limitations of one or more of the claims of the '733 Patent, including at least claim 1.

**ANSWER TO PARAGRAPH 60:** Cisco Systems denies each and every allegation contained in Paragraph 60.

61. For example, the '733 Accused Products practice a method for apportioning delays of a plurality of network elements on a round trip path in a network. The '733 Accused Products implement the use of IP Service Level Agreements ("SLA"), which collect network performance metrics data that includes delay, jitter, packet loss, packet sequencing, path, connectivity, server, or website download time, or voice quality scores.<sup>23</sup> IP SLAs minimize these processing delays on the source device as well as on the target device to determine round-trip times.

**ANSWER TO PARAGRAPH 61:** Cisco Systems denies each and every allegation contained in Paragraph 61.

62. The '733 Accused Products practice a method of transmitting, at a user element, a loopback packet having a probe session indicator along said round trip path, wherein said roundtrip path reaches a core network element, and wherein the loopback packet is received at said user element after completing said roundtrip path. The '733 Accused Products implement the use of IP SLAs, which provide various network performance metrics such as delay, jitter, and packet loss to the user device (e.g., a user element). By way of example, IP SLAs test packets (e.g., loopback packets) via time stamping to minimize processing delays. The source and target devices (e.g., network elements) record round-trip time stamps using the time indicator (e.g., a probe session indicator) embedded in the IP SLA packets.

**ANSWER TO PARAGRAPH 62:** Cisco Systems denies each and every allegation contained in Paragraph 62.

63. Further, the '733 Accused Products practice a method of determining at each of the plurality of network elements on said round trip path the presence of said probe session indicator, and responsive to the presence of said probe session indicator, logging a first timestamp corresponding to the time of receipt of said loopback message, and a second timestamp corresponding to the time of retransmission of said loopback message. IP SLA packets (e.g., loopback packets) record time stamps during reception and transmission at each network element. The source and target devices (e.g., network elements) record timestamps along a roundtrip packet processing path. When the packet is received, the timestamps are collected by the embedded packet indicators.<sup>24</sup> A timestamp is recorded corresponding to the time of receipt of said loopback message, and another timestamp is recorded corresponding to the time the loopback packet is sent (e.g., the time of retransmission).<sup>25</sup>

**ANSWER TO PARAGRAPH 63:** Cisco Systems denies each and every allegation contained in Paragraph 63.

64. Lastly, the '733 Accused Products practice a method of transmitting at each of said plurality of network elements said first and second timestamps to a network management system.

Each network element transmits the two timestamps in response to the IP SLA packet(s). A round-trip starts with sending an IP SLA packet from the source router to the target router and back again from the target router to the source router. The timestamps collected from the network elements can be reported (e.g., transmitted) to the network management system.<sup>26</sup>

**ANSWER TO PARAGRAPH 64:** Cisco Systems denies each and every allegation contained in Paragraph 64.

65. Cisco Systems has received notice and actual or constructive knowledge of the '733 Patent and the infringing nature of the '733 Accused Products since at least the date of service of this Complaint.

**ANSWER TO PARAGRAPH 65:** Cisco Systems denies each and every allegation contained in Paragraph 65.

66. Since at least the date of service of this Complaint, through its actions, Cisco Systems has indirectly infringed and continues to indirectly infringe the '733 Patent in violation of 35 U.S.C. § 271(b). Cisco Systems has actively induced product makers, distributors, retailers, and/or end users of the '733 Accused Products to directly infringe the '733 Patent throughout the United States, including within this Judicial District, by, among other things, advertising and promoting the use of the '733 Accused Products in various websites, including providing and disseminating product descriptions, operating manuals, and other instructions on how to implement and configure the '733 Accused Products. Examples of such advertising, promoting, and/or instructing include the documents at:

- <https://www.cisco.com/c/en/us/support/routers/800-series-industrial-routers/series.html>
- <https://www.cisco.com/c/en/us/support/routers/800m-integrated-services-router-isr/model.html>
- <https://www.cisco.com/c/en/us/support/routers/2000-series-connected-grid-routers/series.html>
- <https://www.cisco.com/c/en/us/support/switches/catalyst-9200-r-series-switches/series.html>
- [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipsla/configuration/15-mt/sla-15-mt-book/sla\\_overview-0.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/ipsla/configuration/15-mt/sla-15-mt-book/sla_overview-0.html)

- <https://learningnetwork.cisco.com/s/blogs/a0D3i000002SKN0EAO/ip-sla-fundamentals>
- <https://www.cisco.com/c/en/us/support/ios-nx-os-software/ios-15-4m-t/products-installation-and-configuration-guides-list.html>

**ANSWER TO PARAGRAPH 66:** To the extent Paragraph 66 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 66.

67. Cisco Systems does so knowing and intending that its customers and end users will commit these infringing acts. Cisco Systems also continues to make, use, offer for sale, sell, and/or import the '733 Accused Product, despite its knowledge of the '733 Patent, thereby specifically intending for and inducing its customers to infringe the '733 Patent through the customers' normal and customary use of the '733 Accused Products.

**ANSWER TO PARAGRAPH 67:** Cisco Systems denies each and every allegation contained in Paragraph 67.

68. In addition, Cisco Systems has indirectly infringed and continues to indirectly infringe the '733 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the '733 Accused Products with knowledge that they are especially designed or adapted to operate in a manner that infringes that patent and despite the fact that the infringing technology or aspects of the products are not a staple article of commerce suitable for substantial non-infringing use.

**ANSWER TO PARAGRAPH 68:** To the extent Paragraph 68 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 68.

69. For example, Cisco Systems is aware that the technology described above included in the '733 Accused Products enables the products to operate as described above and that such functionality infringes the '733 Patent, including claim 1. Cisco Systems continues to sell and offer to sell the '733 Accused Products in the United States after receiving notice of the '733 Patent and how the product's functionality infringes that patent.

**ANSWER TO PARAGRAPH 69:** Cisco Systems denies each and every allegation contained in Paragraph 69.

70. The infringing aspects of the '733 Accused Products can be used only in a manner that infringes the '733 Patent and thus have no substantial non-infringing uses. The infringing aspects of those instrumentalities otherwise have no meaningful use, let alone any meaningful non-infringing use.

**ANSWER TO PARAGRAPH 70:** Cisco Systems denies each and every allegation contained in Paragraph 70.

71. Brazos has suffered damages as a result of Cisco Systems' direct and indirect infringement of the '733 Patent in an amount adequate to compensate for Cisco Systems' infringement, but in no event less than a reasonable royalty for the use made of the invention by Cisco Systems, together with interest and costs as fixed by the Court.

**ANSWER TO PARAGRAPH 71:** To the extent Paragraph 71 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 71.

#### **RESPONSE TO COUNT 5**

72. Brazos repeats and re-alleges the allegations in the preceding paragraphs as if fully set forth herein.

**ANSWER TO PARAGRAPH 72:** Cisco Systems repeats and re-alleges the responses set forth in the preceding paragraphs above as though set forth in length herein.

73. On May 31, 2016, the U.S. Patent & Trademark Office duly and legally issued the '014 Patent entitled "Service-based networking." A true and correct copy of the '014 Patent is attached as Exhibit E to this Complaint.

**ANSWER TO PARAGRAPH 73:** Cisco Systems admits that Exhibit E appears to be a copy of the '014 patent, which is titled "Service-based networking." Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the remaining allegations contained in Paragraph 73 and on that basis denies each and every allegation.

74. Brazos is the owner of all rights, title, and interest in and to the '014 Patent, including the right to assert all causes of action arising under the '014 Patent and the right to any remedies for the infringement of the '014 Patent.

**ANSWER TO PARAGRAPH 74:** Cisco Systems is without sufficient knowledge or information to form a belief as to the truth of the allegations contained in Paragraph 74 and on that basis denies each and every allegation.

75. Claim 18 of the '014 Patent recites:

18. A method, comprising:

running, by a processor, a connected services stack, the connected services stack comprising a connected services layer configured to operate below an application layer and above a transport layer, wherein the connected services layer is configured to support establishment of a service connection between the connected services layer and a remote connected services layer of a remote endpoint, wherein the connected services layer is configured to support establishment of the service connection based on a service name of the connected services layer, a service name of the remote connected services layer, and a service connection identifier for the service connection, wherein the connected services layer is configured to:

send, toward a server, a service connection request message comprising the service name of the connected services layer and the service name of the remote connected services layer of the remote endpoint; and

receive, from the server, a service connection response message comprising the service name of the remote connected services layer of the remote endpoint, an Internet Protocol (IP) address of the remote endpoint, and the service connection identifier for the service connection.

**ANSWER TO PARAGRAPH 75:** Cisco Systems admits the allegations in Paragraph 75.

76. Cisco Systems has directly infringed and continues to directly infringe, literally and/or under the doctrine of equivalents, one or more claims, including at least claim 18, of the '014 Patent in violation of 35 U.S.C. § 271(a) because Cisco Systems makes, uses, offers for sale, sells, and/or imports certain products, including within this Judicial District, such as the Cisco Ultra 5G packet core solution, which is implemented on at least the following products: Cisco Ultra Cloud Core, and the Cisco Ultra / Virtual Packet Core (VPCSW) ("014 Accused Products"). Cisco Systems' infringing use of the '014 Accused Products includes its internal use and testing of the '014 Accused Products.

**ANSWER TO PARAGRAPH 76:** Cisco Systems denies each and every allegation contained in Paragraph 76.

77. The '014 Accused Products satisfy all claim limitations of one or more of the claims of the '014 Patent, including at least claim 18.

**ANSWER TO PARAGRAPH 77:** Cisco Systems denies each and every allegation contained in Paragraph 77.

78. For example, the '014 Accused Products practice a method comprising running, by a processor, a connected services stack, the connected services stack comprising a connected services layer configured to operate below an application layer and above a transport layer, wherein the connected services layer is configured to support establishment of a service connection between the connected services layer and a remote connected services layer of a remote endpoint, wherein the connected services layer is configured to support establishment of the service connection based on a service name of the connected services layer, a service name of the remote connected services layer, and a service connection identifier for the service connection. Cisco provides an Ultra 5G packet core solution which is based on the 3GPP 5G Service-Based Architecture.<sup>27</sup> In the 3GPP 5G Service-Based Architecture, the functions of a 5G network component are delivered by way of a set of interconnected Network Functions ("NF") that can access other NF services.<sup>28</sup> Each NF node runs a transmission control protocol/Internet protocol ("TCP/IP") stack (e.g., a connected services stack). An NF allows establishment of service connections with other remote NFs using the name of the service producer instance (e.g., a servicename of the connected services layer), name of the service consumer instance (e.g., a service name of the remote connected services layer), and a unique ID of the service instance within the given NF instance (e.g., a service connection identifier for the service connection).

**ANSWER TO PARAGRAPH 78:** Cisco Systems denies each and every allegation contained in Paragraph 78.

79. Further, the '014 Accused Products comprise a method wherein the connected services layer is configured to send, toward a server, a service connection request message comprising the service name of the connected services layer and the service name of the remote connected services layer of the remote endpoint. In the 5G Service-Based Architecture, the Network Repository Function ("NRF") (e.g., a server) allows an NF to register its services with the NRF. Additionally, the NRF provides a "NFDiscovery" service that can be used by NF consumers in a HTTP request to discover services offered by NF producers (e.g., a remote endpoint).<sup>30</sup> The "NF Discovery" service supports the "NFService" data type which can be sent by the consumer to the NRF in a HTTP request (e.g., a service connection request message) to discover the services and other connection parameters of the producer.<sup>31</sup> The "NFService" data type supports different attributes such as IP address and serviceInstanceID (e.g., a service connection identifier for the service connection).<sup>32</sup>

**ANSWER TO PARAGRAPH 79:** Cisco denies each and every allegation contained in Paragraph 79.

80. Finally, the '014 Accused Products comprise a method wherein the connected services layer is configured to receive, from the server, a service connection response message comprising the service name of the remote connected services layer of the remote endpoint, an Internet Protocol (IP) address of the remote endpoint, and the service connection identifier for the service connection. The NRF (e.g., a server) receives the request and will reply to the NF consumer with the HTTP Response message that contains the service name, IP address of the producer and the serviceInstance ID (e.g., a service connection identifier for the service connection).<sup>33</sup>

**ANSWER TO PARAGRAPH 80:** Cisco Systems denies each and every allegation contained in Paragraph 80.

81. Cisco Systems has received notice and actual or constructive knowledge of the '014 Patent and the infringing nature of the '014 Accused Products since at least the date of service of this Complaint.

**ANSWER TO PARAGRAPH 81:** Cisco Systems denies each and every allegation contained in Paragraph 81.

82. Since at least the date of service of this Complaint, through its actions, Cisco Systems has indirectly infringed and continues to indirectly infringe the '014 Patent in violation of 35 U.S.C. § 271(b). Cisco Systems has actively induced product makers, distributors, retailers, and/or end users of the '014 Accused Products to directly infringe the '014 Patent throughout the United States, including within this Judicial District, by, among other things, advertising and promoting the use of the '014 Accused Products in various websites, including providing and disseminating product descriptions, operating manuals, and other instructions on how to implement and configure the '014 Accused Products. Examples of such advertising, promoting, and/or instructing include the documents at:

- <https://www.cisco.com/c/en/us/products/collateral/wireless/packet-core/datasheet-c78-744630.html>
- <https://www.cisco.com/c/en/us/products/collateral/wireless/packet-core/datasheet-c78-741418.html>
- <https://www.cisco.com/c/en/us/solutions/service-provider/mobile-internet/ultra-5g-packet-core-solution-whitepaper.html>
- <https://www.cisco.com/c/dam/en/us/products/collateral/routers/network-convergence-system-500-series-routers/white-paper-c11-740360.pdf>
- <https://www.cisco.com/c/en/us/products/wireless/packet-core/index.html>

**ANSWER TO PARAGRAPH 82:** To the extent Paragraph 82 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 82.

83. Cisco Systems does so knowing and intending that its customers and end users will commit these infringing acts. Cisco Systems also continues to make, use, offer for sale, sell, and/or import the '014 Accused Products, despite its knowledge of the '014 Patent, thereby specifically intending for and inducing its customers to infringe the '014 Patent through the customers' normal and customary use of the '014 Accused Products.

**ANSWER TO PARAGRAPH 83:** Cisco Systems denies each and every allegation contained in Paragraph 83.

84. In addition, Cisco Systems has indirectly infringed and continues to indirectly infringe the '014 Patent in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, the '014 Accused Products with knowledge that they are especially designed or adapted to operate in a manner that infringes that patent and despite the fact that the infringing technology or aspects of the products are not a staple article of commerce suitable for substantial non-infringing use.

**ANSWER TO PARAGRAPH 84:** To the extent Paragraph 84 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 84.

85. For example, Cisco Systems is aware that the technology described above included in the '014 Accused Products enables the products to operate as described above and that such functionality infringes the '014 Patent, including claim 18. Cisco Systems continues to sell and offer to sell the '014 Accused Products in the United States after receiving notice of the '014 Patent and how the product's functionality infringes that patent.

**ANSWER TO PARAGRAPH 85:** Cisco Systems denies each and every allegation contained in Paragraph 85.

86. The infringing aspects of the '014 Accused Products can be used only in a manner that infringes the '014 Patent and thus have no substantial non-infringing uses. The infringing aspects of those instrumentalities otherwise have no meaningful use, let alone any meaningful non-infringing use.

**ANSWER TO PARAGRAPH 86:** Cisco Systems denies each and every allegation contained in Paragraph 86.

87. Brazos has suffered damages as a result of Cisco Systems' direct and indirect infringement of the '014 Patent in an amount adequate to compensate for Cisco Systems' infringement, but in no event less than a reasonable royalty for the use made of the invention by Cisco Systems, together with interest and costs as fixed by the Court.

**ANSWER TO PARAGRAPH 87:** To the extent Paragraph 87 alleges claims of indirect infringement, the parties have entered into a stipulation reflecting withdrawal of such claims and no answer is required. *See* D.I. 22. To the extent an answer is required, Cisco Systems denies each and every allegation contained in Paragraph 87.

#### **PRAYER FOR RELIEF**

Cisco denies that WSOU is entitled to either the requested relief or any other relief.

#### **DEFENSES**

Cisco hereby asserts the following defenses without undertaking or otherwise shifting any applicable burdens of proof. Cisco reserves the right to assert additional defenses, as warranted by facts revealed through investigation and discovery.

##### **FIRST DEFENSE – FAILURE TO STATE A CLAIM**

WSOU's Complaint fails to state a claim on which relief can be granted.

##### **SECOND DEFENSE – NON-INFRINGEMENT**

Cisco does not infringe, has not infringed, and does not and has not induced infringement or contributed to infringement of any claim of the '216, '859, '106, '733, or '104 patents (collectively, the "Patents-in-Suit") under any theory, including literal infringement or infringement under the doctrine of equivalents.

### **THIRD DEFENSE – NO WILLFUL INFRINGEMENT**

WSOU is not entitled to enhanced damages under 35 U.S.C. § 284 because Cisco Systems has not intentionally, willfully, or deliberately infringed any claim of the Asserted Patents, or acted with egregious conduct.

### **FOURTH DEFENSE – INVALIDITY AND INELIGIBILITY**

Each and every claim of the Asserted Patents is invalid and/or ineligible for failure to meet the conditions and requirements for patentability set forth, inter alia, in 35 U.S.C. § 101, et seq., including, without limitation, 35 U.S.C. §§ 101, 102, 103, and/or 112.

### **FIFTH DEFENSE – PROSECUTION HISTORY ESTOPPEL AND DISCLAIMER**

By virtue of statements, amendments made, and/or positions taken during prosecution of the application for the Asserted Patents and/or related patents or patent applications, whether explicit or implicit, WSOU is barred from claiming that the Asserted Patents cover or include, either literally or by application of the doctrine of equivalents, any of Cisco's methods, products, systems, services, or processes. To the extent that WSOU's alleged cause of action for infringement of any of the Asserted Patents is based on the doctrine of equivalents, Brazos is barred under the doctrine of prosecution history estoppel and/or other limits to the doctrine of.

### **SIXTH DEFENSE – FAILURE TO MARK**

To the extent WSOU has failed to comply with the notice requirements of 35 U.S.C. § 287, WSOU is barred from all monetary relief for acts that occurred prior to WSOU providing actual notice to Cisco.

### **SEVENTH DEFENSE – LIMITATION OF DAMAGES**

Pursuant to 35 U.S.C. § 286, WSOU is barred from recovering any damages for acts that occurred more than six years before it filed the Complaint in this action.

**EIGHTH DEFENSE – WAIVER AND ESTOPPEL**

WSOU's claims are barred, in whole or in part, by the doctrines of waiver and/or equitable estoppel.

**NINTH DEFENSE – UNCLEAN HANDS**

WSOU's claims are barred, in whole or in part, by the doctrine of unclean hands.

**TENTH DEFENSE – NO ATTORNEYS' FEES**

WSOU cannot prove that this is an exceptional case justifying an award of attorneys' fees against Cisco under 35 U.S.C. § 285 or otherwise.

**PRAYER FOR RELIEF**

Cisco respectfully requests that this Court enter judgment in their favor against WSOU, and grant the following relief:

- A. A judgment dismissing WSOU's Complaint against Cisco in its entirety with prejudice;
- B. An Order declaring that WSOU, its officers, directors, agents, servants, employees, and attorneys, and those persons in active concert with them, take nothing on the claims asserted in the Complaint;
- C. A Declaration that Cisco has not infringed any valid claim of any of the Asserted Patents and is not liable on Counts 1 through 5;
- D. All costs be taxed against WSOU;
- E. A finding that this case is exceptional pursuant to 35 U.S.C. § 285 and awarding Cisco its reasonable attorneys' fees, expenses, and costs incurred in connection with this action;
- F. An award to Cisco its costs, expenses, disbursements, and attorneys' fees incurred in connection with this action; and
- G. Any such other relief in favor of Cisco and against WSOU as the Court may deem

appropriate and just under the circumstances.

**JURY DEMAND**

Cisco requests a jury trial for those issues so triable herein.

DATE: April 19, 2021.

Respectfully Submitted,

Brian Rosenthal with permission,  
by Michael E. Jones

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**CERTIFICATE OF SERVICE**

The undersigned certifies that on April 19, 2021, I electronically filed this document with the Clerk of Court via the Court's CM/ECF system which will send notification of such filing to all counsel of record, all of whom have consented to electronic service in this action.

/s/ Michael E. Jones